

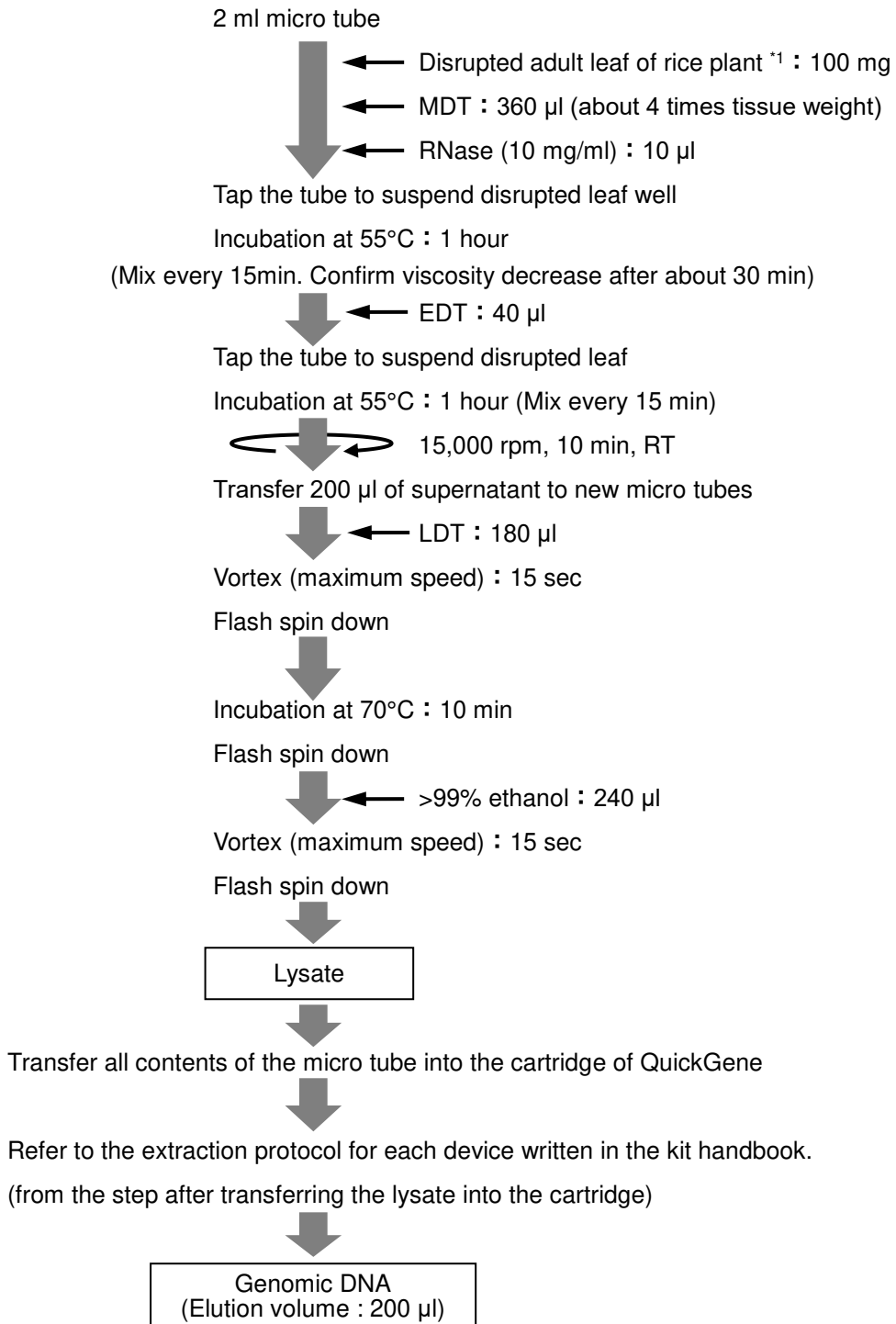


4. Genomic DNA Extraction from Tissue of Plant

DB-1

Genomic DNA Extraction from Adult Leaf of Rice Plant

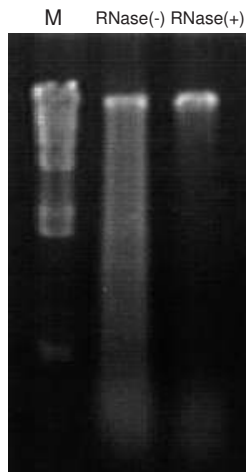
Protocol



*1 Multibeadshocker (Yasui Kikai Corporation) was used for disruption

Results

Electropherogram



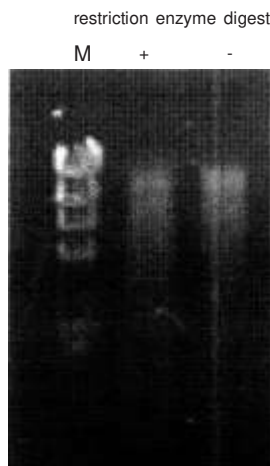
M : λ -*Hin* d III

The yield of genomic DNA

| Sample | RNase (+) | RNase (-) |
|------------------|-----------|-----------|
| Yield (μ g) | 10 | 36 |

Other

- Restriction Enzyme Digestion



M : λ -*Hin* d III

(Contributed by Professor Yukimoto Iwasaki and Yukiko Fujisawa,
Faculty of Biotechnology, Fuyuki Prefectural University)

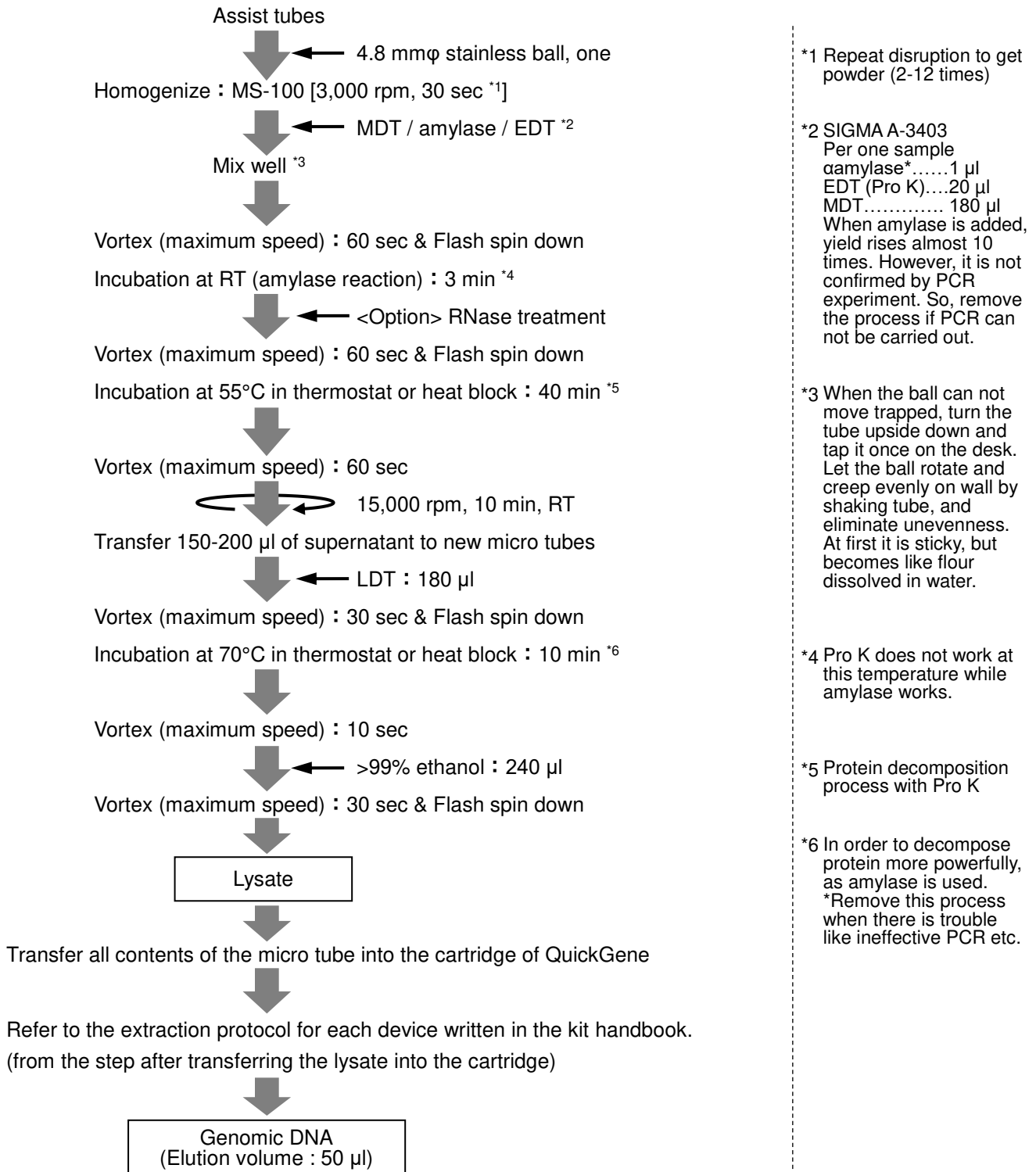
Common protocol is usable for the following

No Data

DB-2

Genomic DNA Extraction from Amaranth Seed

Protocol



Results

No Data

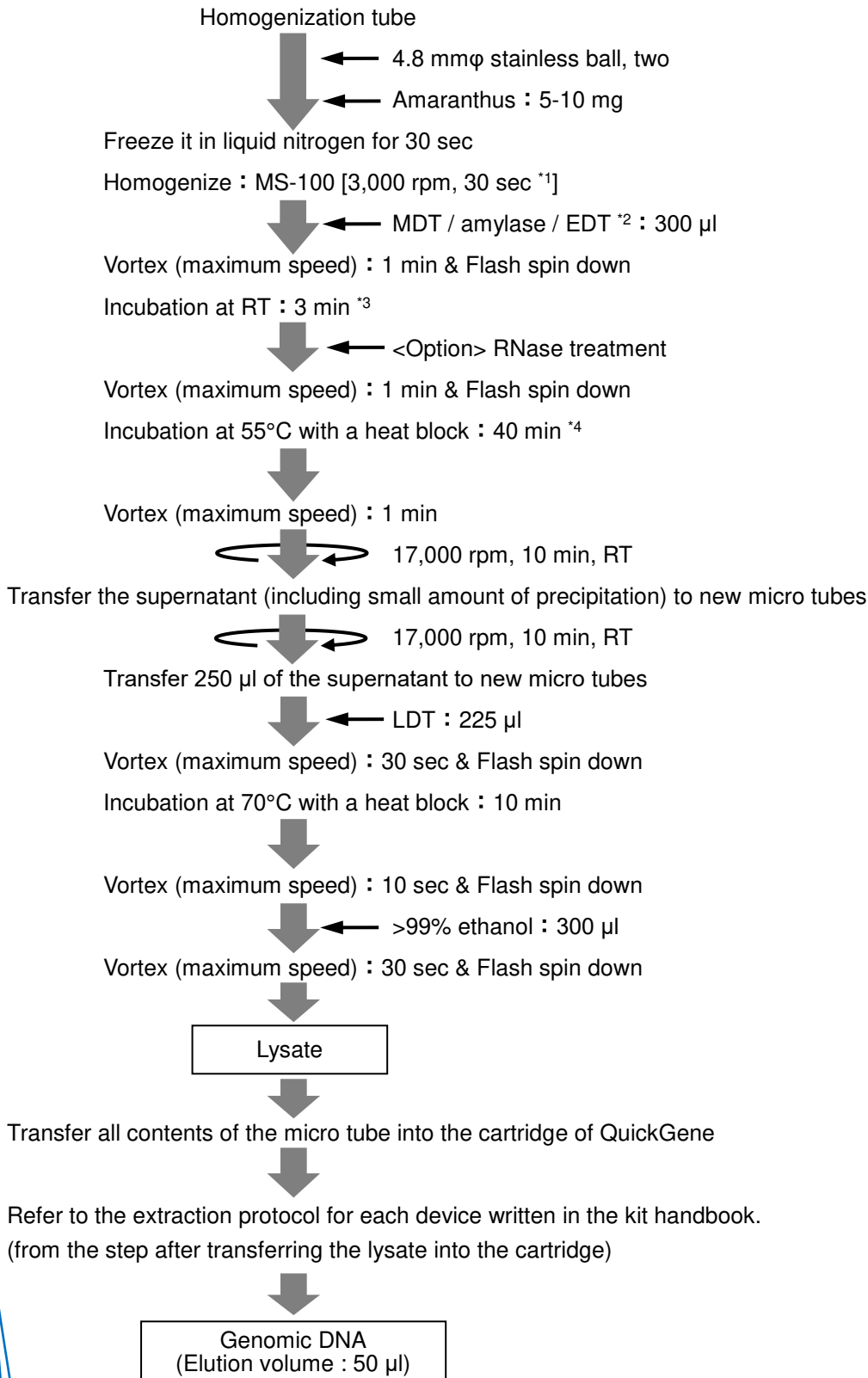
Common protocol is usable for the following

No Data

DB-3

Genomic DNA Extraction from Amaranthus

Protocol



*1 Become powder by homogenization

*2 *SIGMA A-3403
Per one sample
αamylase*.....1.5 µl
EDT (Pro K).....30 µl
MDT.....270 µl
In the case of trouble
(PCR reaction is bad.),
adding αamylase cut off.

*3 Amylase reactive, but
Pro K don't reactive in
this process

*4 Pro K reactive in this
process

Results

Electropherogram

M 1 2



1 : 5 mg amaranthus
2 : 10 mg amaranthus
M : λ -Hin d III Marker

1% Agarose
EtBr
100V
30 min
RNase treatment

The yield of genomic DNA

Samples are below detection limit

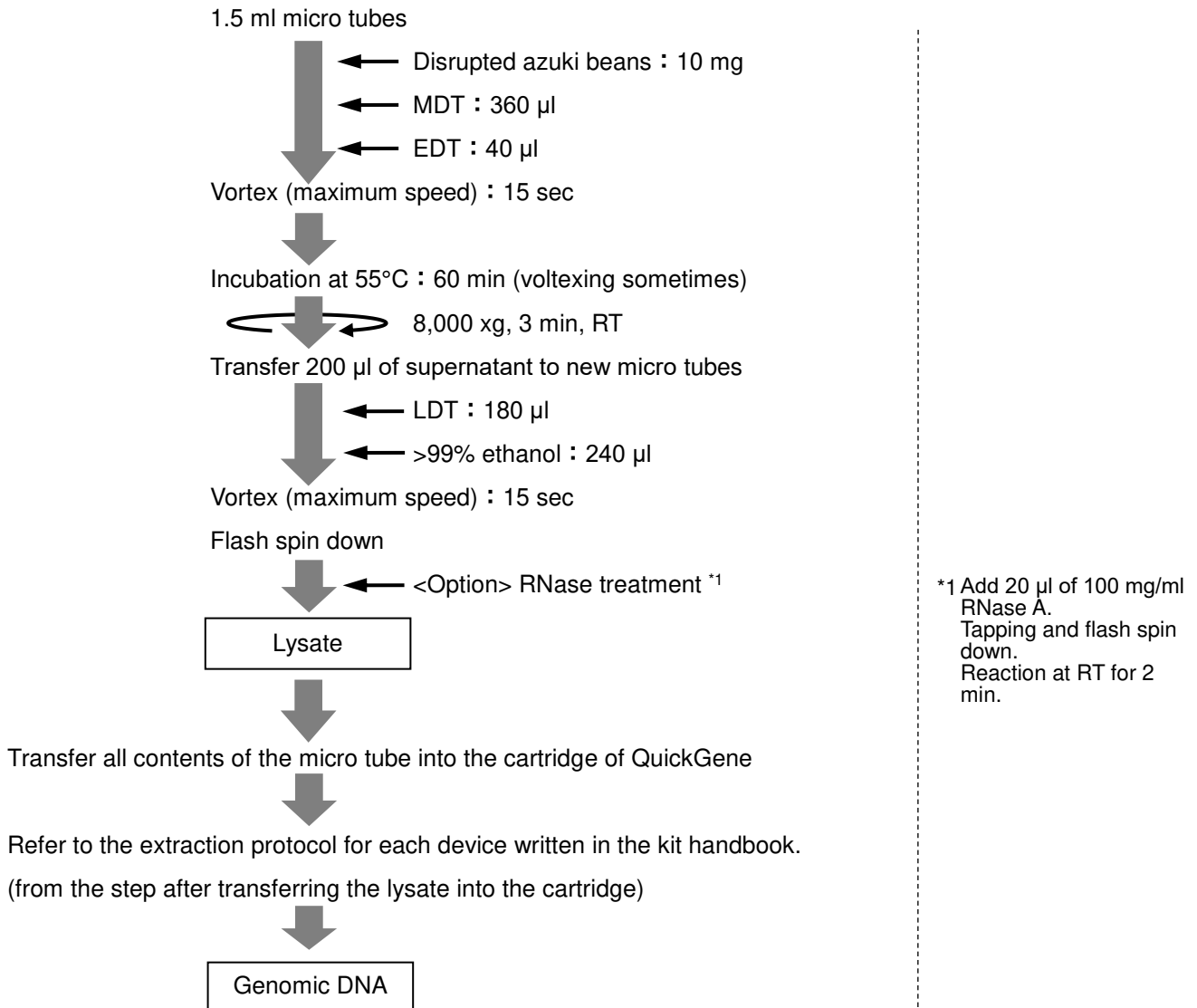
Common protocol is usable for the following

Lettuce

DB-4

Genomic DNA Extraction from Azuki Beans

Protocol



Results

No Data

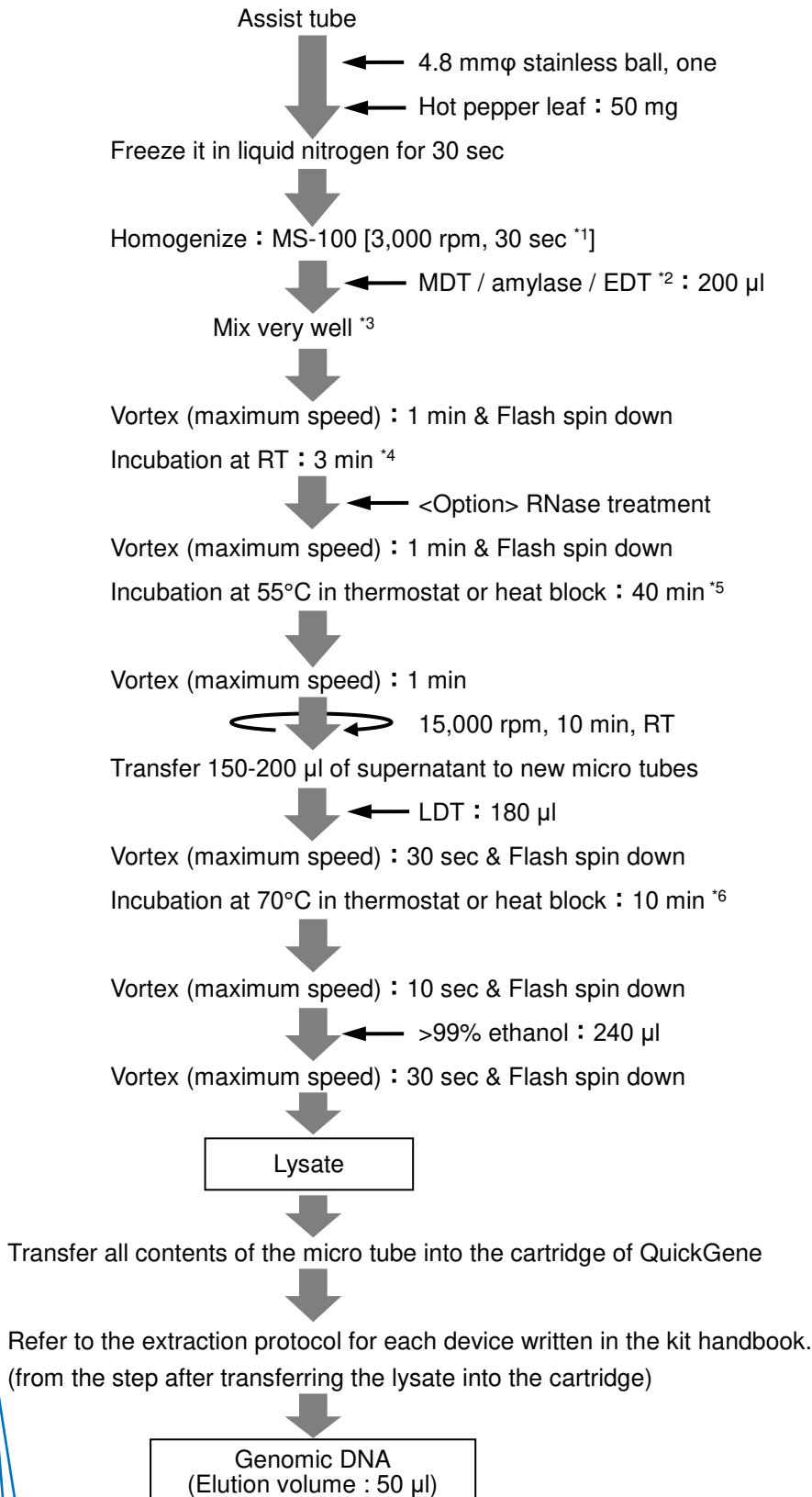
Common protocol is usable for the following

No Data

DB-5

Genomic DNA Extraction from Hot Pepper Leaf

Protocol



*1 After 1st disruption, re-freeze for 30 sec in liquid nitrogen. By 2nd disruption, it becomes powder like green powdered tea.

*2 SIGMA A-3403
Per one sample
amylase*.....1 μl
EDT (Pro K).....20 μl
MDT..... 180 μl
When amylase is added, yield rises almost 10 times. However, it is not confirmed by PCR experiment. So, remove the process if PCR can not be carried out.

*3 When the ball can not move trapped, turn the tube upside down and tap it once on the desk. Let the ball rotate and creep evenly on wall by shaking tube, and eliminate unevenness. At first it is sticky, but becomes like flour dissolved in water.

*4 Pro K does not work at this temperature while amylase works.

*5 Protein decomposition process with Pro K

*6 In order to decompose protein more powerfully, as amylase is used.
*Remove this process when there is trouble like ineffective PCR etc.

Depending on sample and storage conditions, nucleic acid may not be extractable.
Therefore, we cannot guarantee accurate data.
The extracted nucleic acid contains unintended acid (ex: when extracting DNA, RNA is also extracted).

Results

No Data

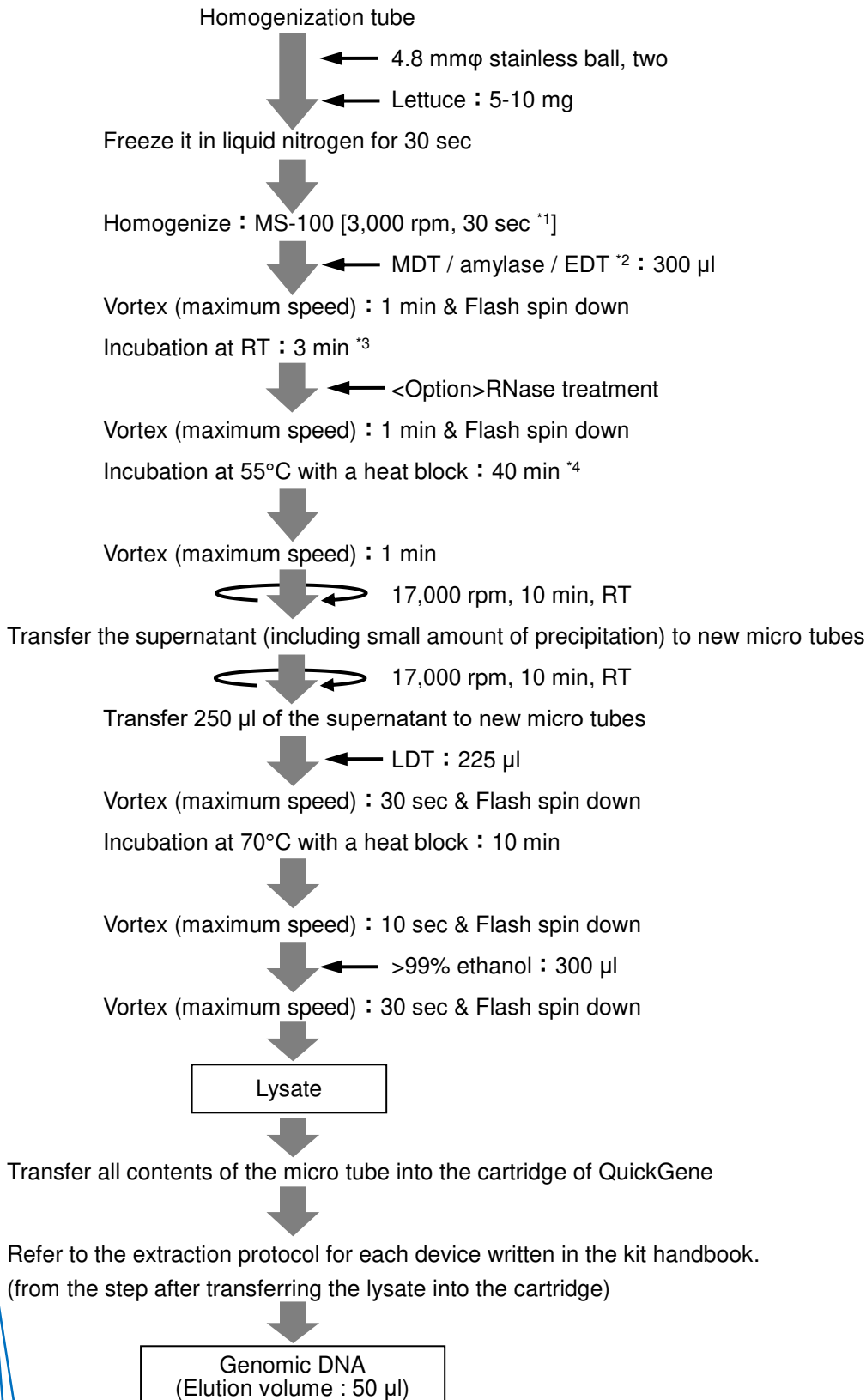
Common protocol is usable for the following

Lettuce

DB-6

Genomic DNA Extraction from Lettuce

Protocol



*1 Become powder by homogenization

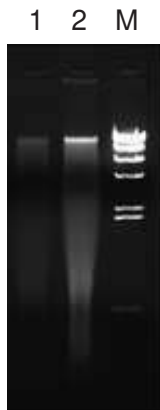
*2 *SIGMA A-3403
Per one sample
amylase*.....1.5 µl
EDT (Pro K).....30 µl
MDT.....270 µl
In the case of trouble
(PCR reaction is bad.),
adding amylase cut off.

*3 Amylase reactive, but
Pro K don't reactive in
this process

*4 Pro K reactive in this
process

Results

Electropherogram



1 : 5 mg lettuce
2 : 10 mg lettuce
M : λ -Hin d III Marker

1% Agarose
EtBr
100V
30 min
RNase treatment

The yield of genomic DNA

| Sample | 10 mg lettuce |
|------------------|---------------|
| Yield (μ g) | 1.2 |

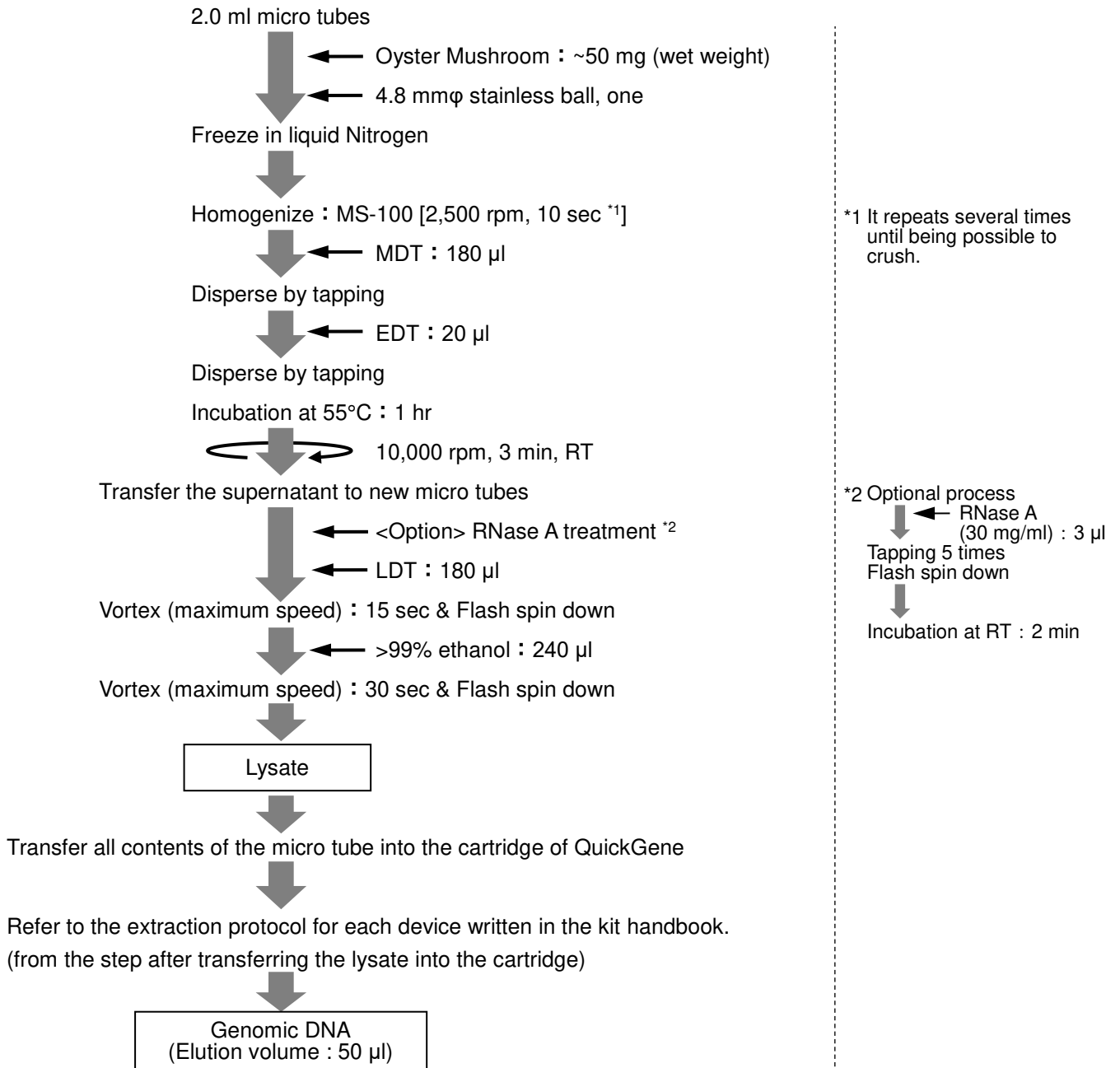
Common protocol is usable for the following

Amaranthus

DB-7

Genomic DNA Extraction from Oyster Mushroom

Protocol



Results

No Data

Common protocol is usable for the following

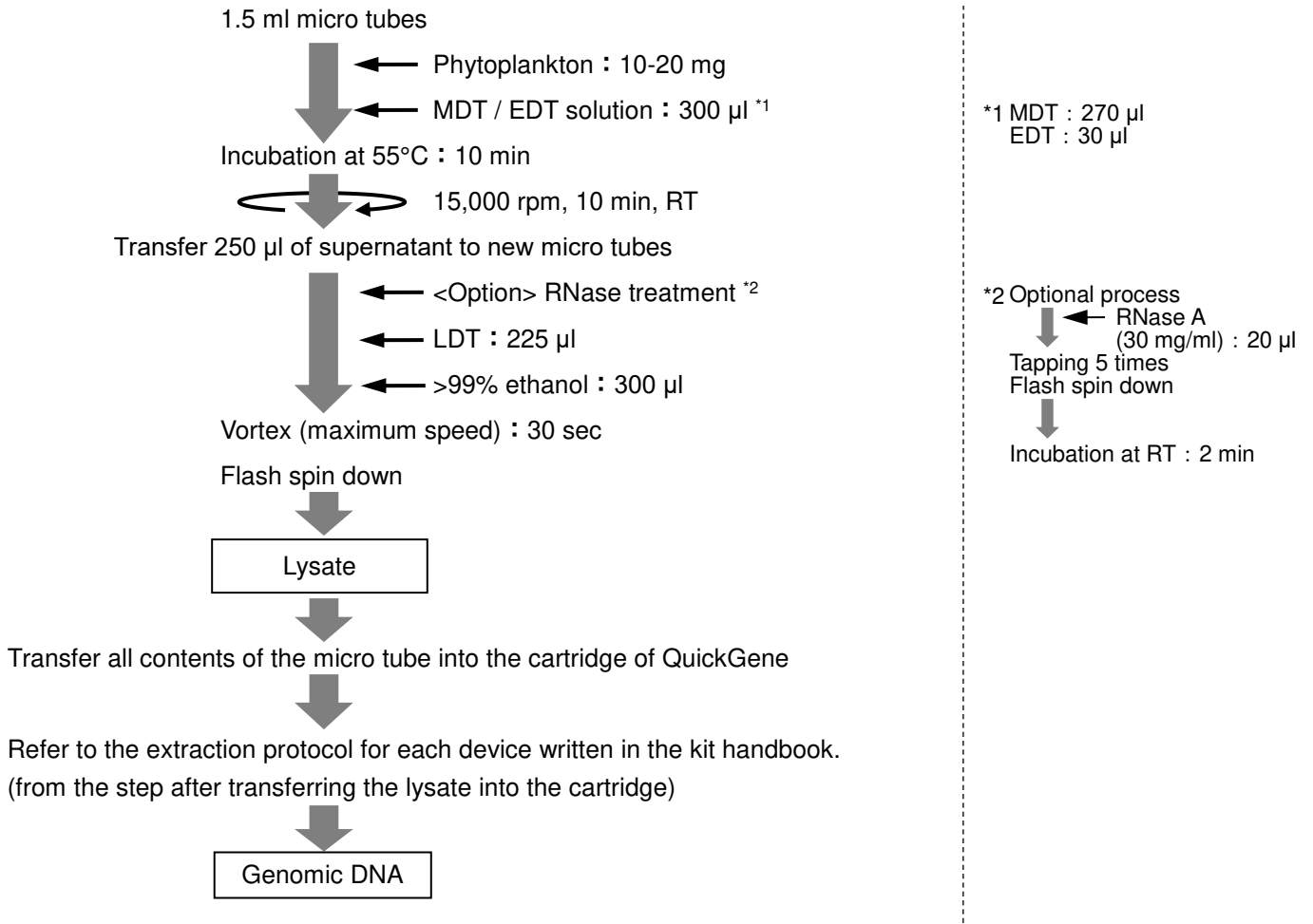
No Data

Depending on sample and storage conditions, nucleic acid may not be extractable.
Therefore, we cannot guarantee accurate data.
The extracted nucleic acid contains unintended acid (ex: when extracting DNA, RNA is also extracted).

DB-8

Genomic DNA Extraction from Phytoplankton

Protocol



Results

No Data

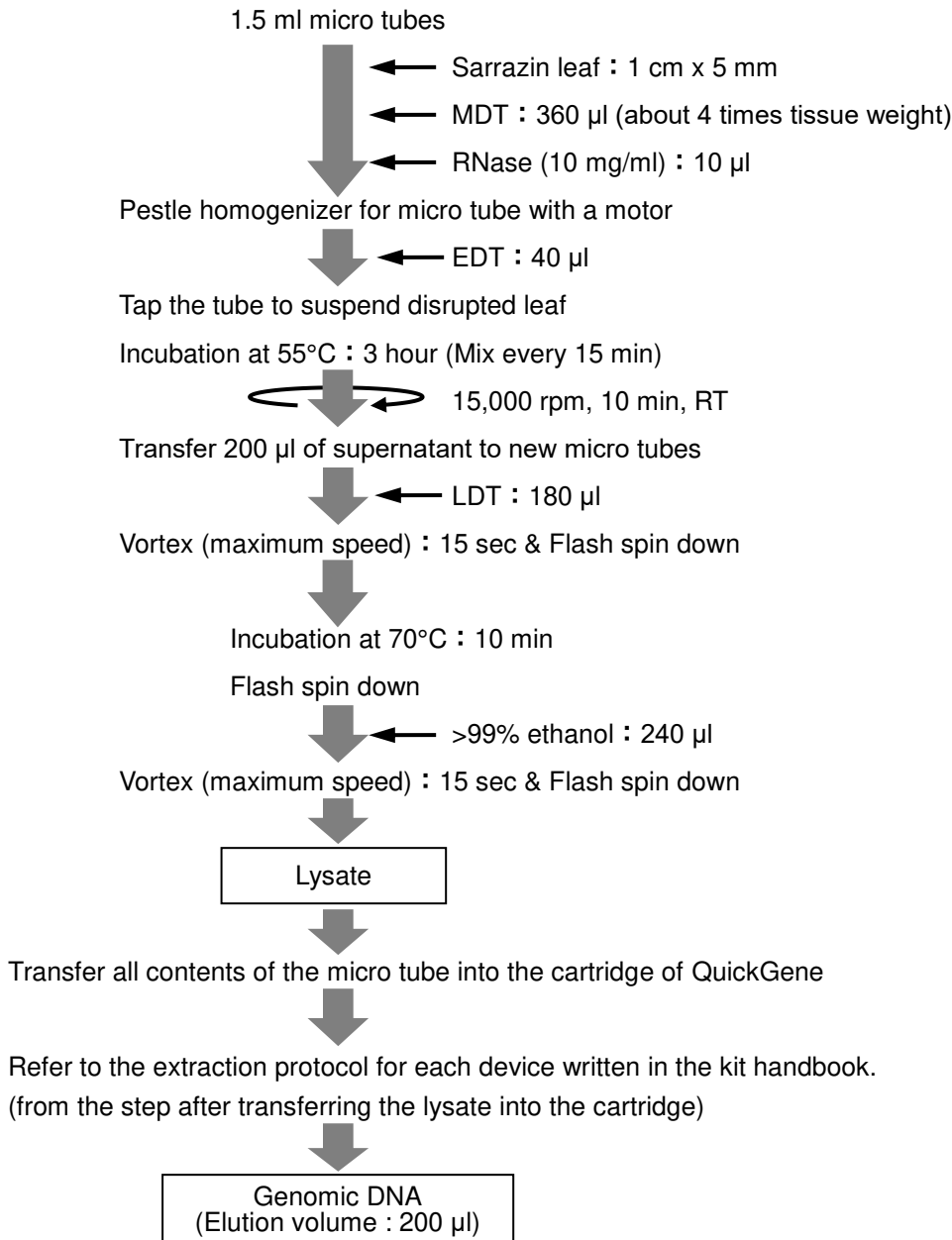
Common protocol is usable for the following

No Data

DB-9

Genomic DNA Extraction from Sarrazin leaf

Protocol



Results

No Data

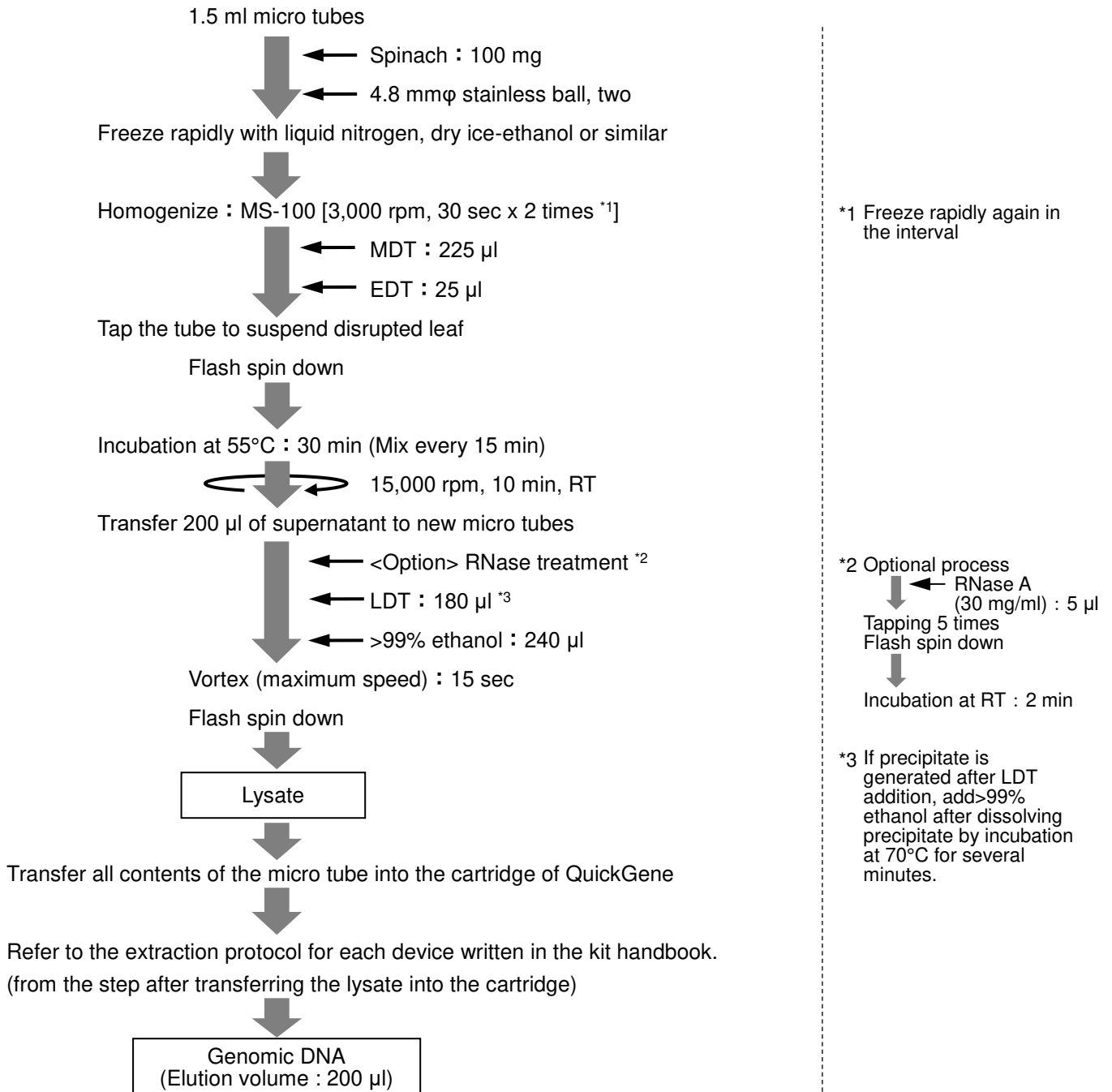
Common protocol is usable for the following

No Data

DB-10

Genomic DNA Extraction from Spinach Leaf

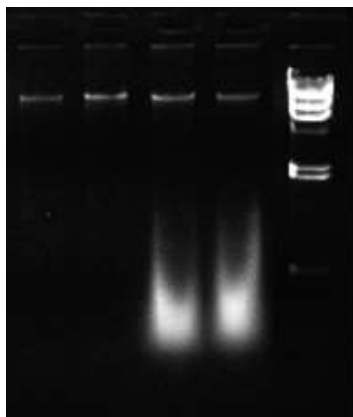
Protocol



Results

Electropherogram

RNase(+) RNase(-) M



Electrophoresis condition : 1% agarose / 1 x TAE

M : λ - *Hind* III

The yield of genomic DNA

| RNase | + | | | | - | | | |
|------------------|------|------|------|------|------|------|------|------|
| Sample | No.1 | No.2 | No.3 | No.4 | No.5 | No.6 | No.7 | No.8 |
| Yield (μ g) | 3.6 | 4.0 | 2.8 | 6.9 | 39.6 | 14.8 | 44.8 | 54.0 |

N=4

Protein contamination : A260/280

| RNase | + | | | | - | | | |
|-----------|------|------|------|------|------|------|------|------|
| Sample | No.1 | No.2 | No.3 | No.4 | No.5 | No.6 | No.7 | No.8 |
| A260/A280 | 1.94 | 1.87 | 1.80 | 1.97 | 2.22 | 2.16 | 2.24 | 2.24 |

N=4

Chaotropic salt contamination : A260/230

| RNase | + | | | | - | | | |
|-----------|------|------|------|------|------|------|------|------|
| Sample | No.1 | No.2 | No.3 | No.4 | No.5 | No.6 | No.7 | No.8 |
| A260/A230 | 1.76 | 1.89 | 1.77 | 2.04 | 2.24 | 1.99 | 2.26 | 2.29 |

N=2

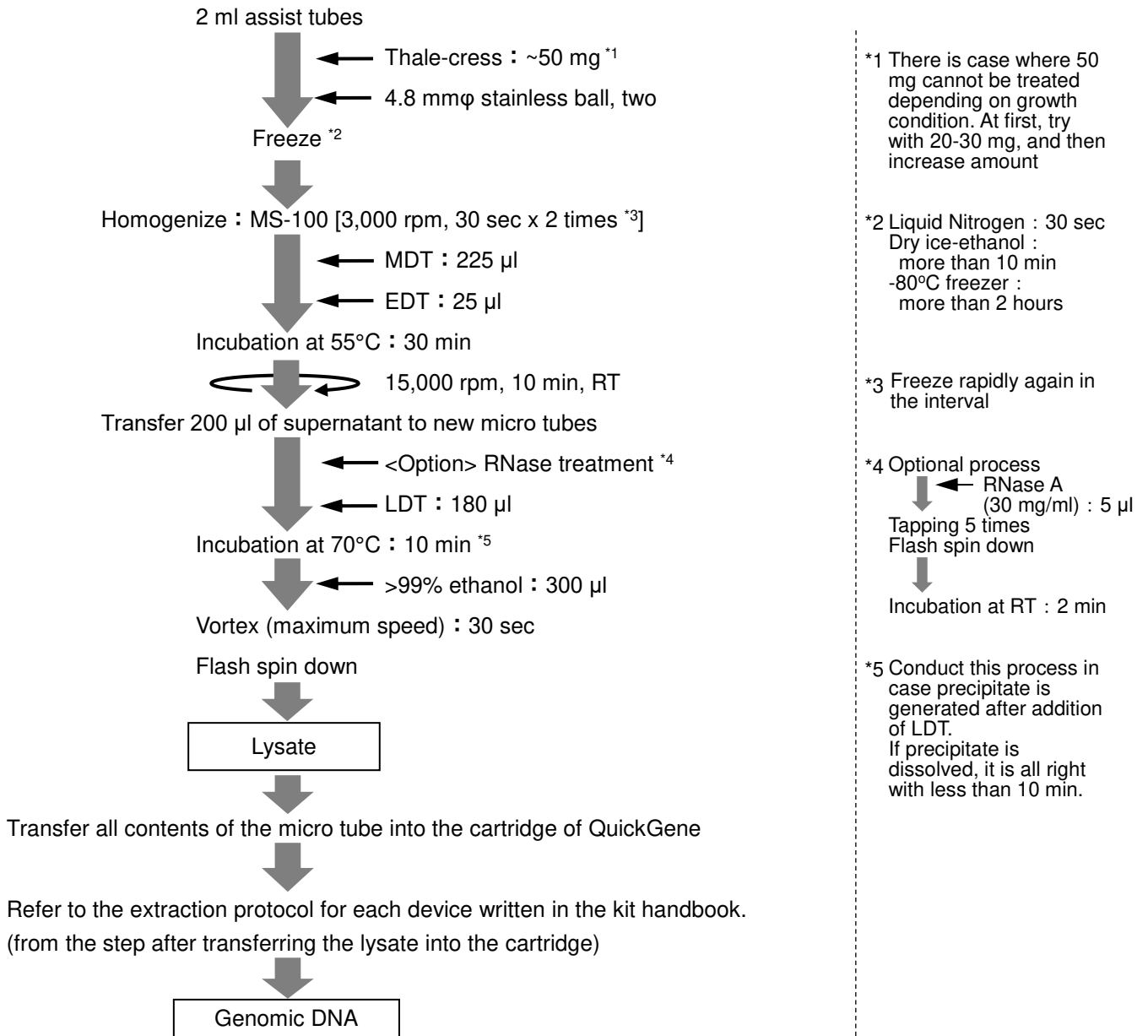
Common protocol is usable for the following

No Data

DB-11

Genomic DNA Extraction from Thale-cress

Protocol



Results

No Data

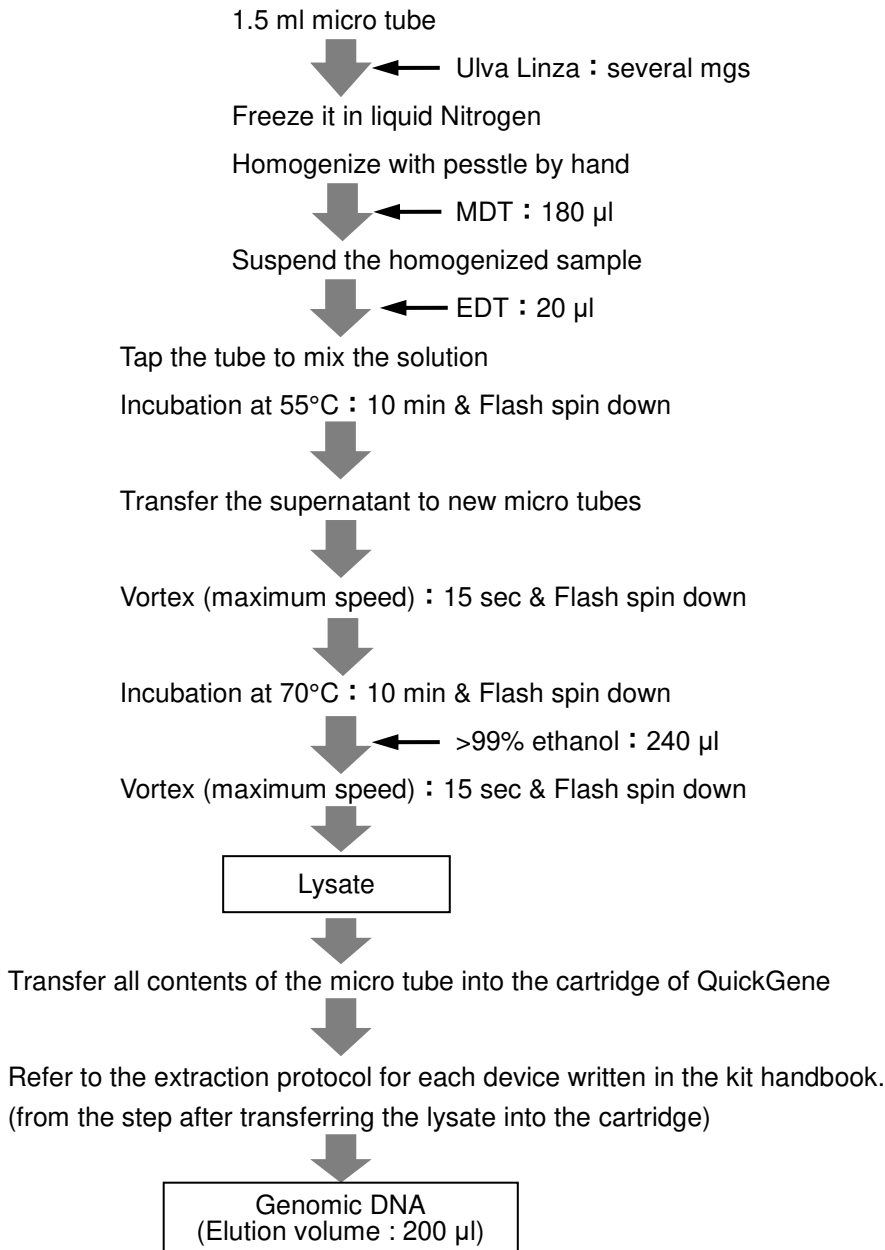
Common protocol is usable for the following

No Data

DB-12

Genomic DNA Extraction from Ulva Linza

Protocol



Results

No Data

Common protocol is usable for the following

No Data

Depending on sample and storage conditions, nucleic acid may not be extractable.
Therefore, we cannot guarantee accurate data.
The extracted nucleic acid contains unintended acid (ex: when extracting DNA, RNA is also extracted).